body which I had not been able to do for six nights. At night the mother would slip into the room when she did not hear a noise. One evening, after sleeping, I awakened to find her face within two inches of mine, evidently listening to see how soundly I slept. The fever took its course and at the end of three weeks the boy was beginning to take soft diet. At this stage I most urgently asked my release.

HOUSEHOLD HYGIENE

BY ISABEL McISAAC

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IV

LIGHTING THE HOUSE

WE all know or should know that sunlight is germicidal in its effects; that few if any bacteria can survive exposure for any length of time to the direct rays of the sun; consequently we have in sunlight the strongest protector of our health. The rays not only protect us from the ravages of disease-producing bacteria, but in many ways which are still imperfectly understood give us strength and vigor, and above all resistance to disease in all forms. It is therefore important for us to utilize the light in our practical every-day life, for next to fresh air the lighting of the house comes in importance.

The natural lighting of the house is of course governed by its situation and surroundings and the arrangement of its windows. We have spoken before of the desirability of a house standing with its four corners to the points of the compass in order that the sunlight may enter all sides at some time during the day. Living and bedrooms should have the first choice of the south and east exposures, as the family uses these rooms more than any others. Halls, stairways, bathrooms, and the dining-room can better occupy the north and west sides than rooms which are more occupied.

The writer has in mind a nurses' home belonging to a certain training school, where the light has been utilized in a very satisfactory way, which might have been particularly bad and unwholesome had not the architect displayed intelligence and foresight.

The building stands in the middle of a city block, facing west, with a hundred foot front. It is four stories high and has a long ell or wing in the back fifty feet wide, which runs back to an alley on the east;

this arrangement gives a twenty-five foot court on both the north and south sides of the wing. The architect put both front and back stairways, the elevator, lavatories, linen room, and nurses' lecture room on the north side, which allows about six extra bedrooms on each floor to the south side, in fact the building which houses over two hundred persons has only one-third of the sleeping rooms facing the north.

In this school nurses are never allowed to occupy a north sleeping room for more than six months.

It is the daily supply of sunshine which counts, particularly in living and bedrooms; but often the sunshine is there and the windows favorable, but we drape the windows with curtains or cover them with wide porches, or allow the large trees to keep the building in shade, or are possessed of a mortal dread of fading carpets and rugs. In the large cities where building space is necessarily confined, this dwelling in obscurity may be unavoidable but not so in the country.

In many pretentious houses one may see at the windows, (1) lace shades, (2) opaque shades, (3) long lace curtains, (4) long silk or woollen hangings; the possibilities of such an arrangement are indescribable, but no doubt a scourge of tuberculosis in such a household would be attributed to the inscrutable ways of Providence, instead of being described as a direct invitation to phthisis, anæmia, nervous depression, etc.

Following all contagious diseases the exposure of furniture, clothing, and the rooms themselves to the direct rays of the sun is a far better means of disinfection than simply wiping off surfaces and other half-way measures of disinfection.

It is not to be expected that the ordinary housewife can understand infection and disinfection as nurses do; the latter are always much surprised upon taking up housekeeping to find that their knowledge of bacteriology and hygiene is of practical use to them everyday, prompting them to throw open windows and doors and utilize the sun and air for the prevention of disease, rather than to employ their nursing skill for the cure of their households.

In the artificial lighting of buildings electricity stands far ahead of any other means; the effects of electric light are the same as sunlight to a much less degree; it does not add to the impurities of the atmosphere; there is almost no danger of fire, and the light is bright, clear, and steady.

The placing of lights of whatever kind should have careful consideration, avoiding direct lights into the eyes. The lights, therefore, are preferably high, all droplights or standing lamps being shaded by opaque shades.

Let the light be abundant for reading. Nothing can be worse for the eyes or spirits than a dim, flickering, dingy light.

A house lighted by gas should be carefully watched for leaking gas pipes. Carbon monoxide, the deadly element of illuminating gas, usually gives warning to the observant by its odor, but we may easily become accustomed to any odor, which to a newcomer may seem very strong, if we allow ourselves to become used to foul air. Carbon monoxide in small quantities as a constituent of the daily supply of air is a slow poison; in large quantities it is a violent poison, besides being extremely dangerous as an explosive in the presence of fire.

Both gas and oil lamps add greatly to the impurities of the atmosphere by combustion. Lamps to give a satisfactory light require, (1) good burners which must be frequently renewed, (2) the best grade of oil, and (3) they must be kept clean. Poor oil is very poor economy, giving a poor light, constantly clogging the wicks and burners, and smoking the chimneys.

Nearly all housekeepers have a few pet economies and light is one of the commonest. A year or a few years of poor lights badly placed will produce bills from the oculist and optician which would pay thrice over for clear, bright, cheerful lights for many years.

MENSTRUATION.—The *New York Medical Journal*, in an abstract from the *British Medical Journal*, says: Bell and Hick, as a result of their studies of the physiology of the female genital organs, have reached the following conclusions regarding menstruation: (1) Menstruation is a periodical function only in so far as the calcium metabolism is in harmony with this periodicity, and the function is dependent upon the calcium metabolism in all its ramifications. (2) The hemorrhage into the Graafian follicle may be coincidental, and is probably the result of the lowered coagulability of the blood, or vasomotor changes; but rupture of the follicle is in no way responsible for menstruation. (3) The bleeding from the uterus, while due to the lowered coagulability of the blood in part, is also dependent on the local changes in the capillaries from which the diapedesis of leucocytes and corpuscles occurs; and further, these leucocytes are an active factor in the conveyance of calcium salts from the glands to the exterior. (4) The uterine glands excrete calcium and mucin, and therefore the uterus is a "menstrual organ." (5) There is a correlation between the ovaries and uterus with reference to menstruation, but the ovary is probably no more predominant than other ductless glands in this respect. (6) Menstruation *per se* is not a necessary adjuvant nor concomitant to fertility and reproduction.